CLAIMS

1. A method for controlling presentation of information to facilitate performance analysis for processing, the method comprising:

displaying a listing of events that have been captured during processing of a set of commands as well as information regarding the processing of the events;

displaying a frame portion that includes information regarding the processing of the set of commands at different chronological points during the processing; and

receiving a user selection of one of the events in the listing and selecting which chronological point should be shown in the frame portion based at least in part on the user-selected event.

2. A method as recited in claim 1, wherein the information regarding the processing of the events comprises a value representing how long it took for processing of the events by a processing unit to finish.

3. A method as recited in claim 1, further comprising:

displaying a timeline portion including a timeline having a plurality of bars, each bar corresponding to a particular one of the events, wherein a location of each bar on the timeline indicates when the corresponding event occurred relative to the other events during processing.

4. A method as recited in claim 1, further comprising:

allowing the user to select a warning window, to be displayed as the frame portion, wherein the warning window identifies violations of one or more recommendations for programming a processing unit that processed the set of commands.

5. A method as recited in claim 1, wherein the processing of the set of commands comprises drawing a frame of video, and wherein the information regarding processing of the set of commands comprises information showing how the frame appears at different chronological points during processing.

6. A method as recited in claim 5, further comprising:

allowing the user to select one of multiple views to be displayed in the frame portion, wherein the multiple views include a render target view that shows the frame as it is drawn at different chronological points while being drawn, a depth buffer view that shows a depth value for each pixel in the frame at different chronological points while the frame is being drawn, and a wireframe view that shows an outline of each triangle rendered in the frame at different chronological points while the frame is being drawn.

7. A method as recited in claim 5, further comprising:

allowing the user to select one of multiple views to be displayed in the frame portion, wherein the multiple views include an overdraw view that shows graphically how many times each pixel in the frame is drawn, and a fill rate view

that shows how fast a graphics processing unit that drew the frame was running when each pixel in the frame was drawn.

8. A method as recited in claim 5, further comprising:

a debugger portion that identifies a pixel shader program or vertex shader program that was executed by a graphics processing unit in drawing the frame, and further identifies input and output register values for each instruction in the shader program as it executed in drawing the selected pixel.

9. One or more computer readable media having one or more instructions that, when executed by one or more processors, causes the one or more processors to:

display a first window that identifies events that have been captured during the drawing of a video frame by a graphics processing unit; and

display a second window that shows how the frame appears at different points while being drawn.

10. One or more computer readable media as recited in claim 9, wherein the first window further identifies, for each of the identified events, a value representing how long it took for drawing of the event by a graphics processing unit to occur.

11. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

display a third window including a timeline having a plurality of bars, each bar corresponding to a particular one of the identified events, wherein a location of each bar on the timeline indicates when the corresponding event occurred relative to the other events during drawing of the frame.

12. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

allow the user to select one of multiple views to be displayed in the second window, wherein the multiple views include a render target view that shows the frame as it is drawn at different points while being drawn, a depth buffer view that shows a depth value for each pixel in the frame at different points while the frame is being drawn, and a wireframe view that shows an outline of each triangle rendered in the frame at different points while the frame is being drawn.

13. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

allow the user to select one of multiple views to be displayed in the second window, wherein the multiple views include an overdraw view that shows graphically how many times each pixel in the frame is drawn, and a fill rate view that shows how fast a graphics processing unit that drew the frame was running when each pixel in the frame was drawn.

14. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

allow the user to select a warning window, to be displayed as the second window, wherein the warning window identifies violations of one or more recommendations for programming a graphics processing unit that drew the frame.

15. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

display a pixel history window that identifies each of the events that affects a user-selected pixel of the frame.

16. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

display a debugger window that identifies a pixel shader program or vertex shader program that was executed by a graphics processing unit in drawing the frame, and further identifies input and output register values for each instruction in the shader program as it executed in drawing the selected pixel.

17. One or more computer readable media as recited in claim 9, wherein the one or more instructions further causes the one or more processors to:

display a mesh debugger window that includes information about a single mesh of the frame, and a table that shows the attribute values for each vertex in the mesh as well as an output of a vertex shader program for each vertex in the mesh.

18. A system comprising:

a memory;

a processor coupled to the memory; and

a plurality of instructions stored in the memory and executed by the processor to present a user interface to enable a user to view information regarding a frame of video, the user interface comprising:

an events window that identifies events that have been captured during the drawing of a video frame by a graphics processing unit, and

a frame window that shows how the frame appears at different chronological points while being drawn.

19. A system as recited in claim 18, wherein the graphics processing unit is part of another device coupled to the system.

20. A system as recited in claim 18, wherein the user interface further comprises:

a timeline window including a timeline having a plurality of bars, each bar corresponding to a particular one of the identified events, wherein a location of each bar on the timeline indicates when the corresponding event occurred relative to the other events during drawing of the frame.